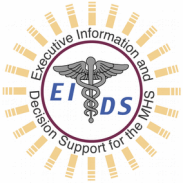


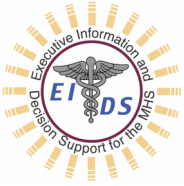
# **TRICARE Data Quality Training Course**

**Hilton Alexandria Mark Center  
February 2006**



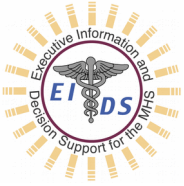
# Presented By

**Mr. Martin Shepherd**  
**Manager EIDS Data Operations**

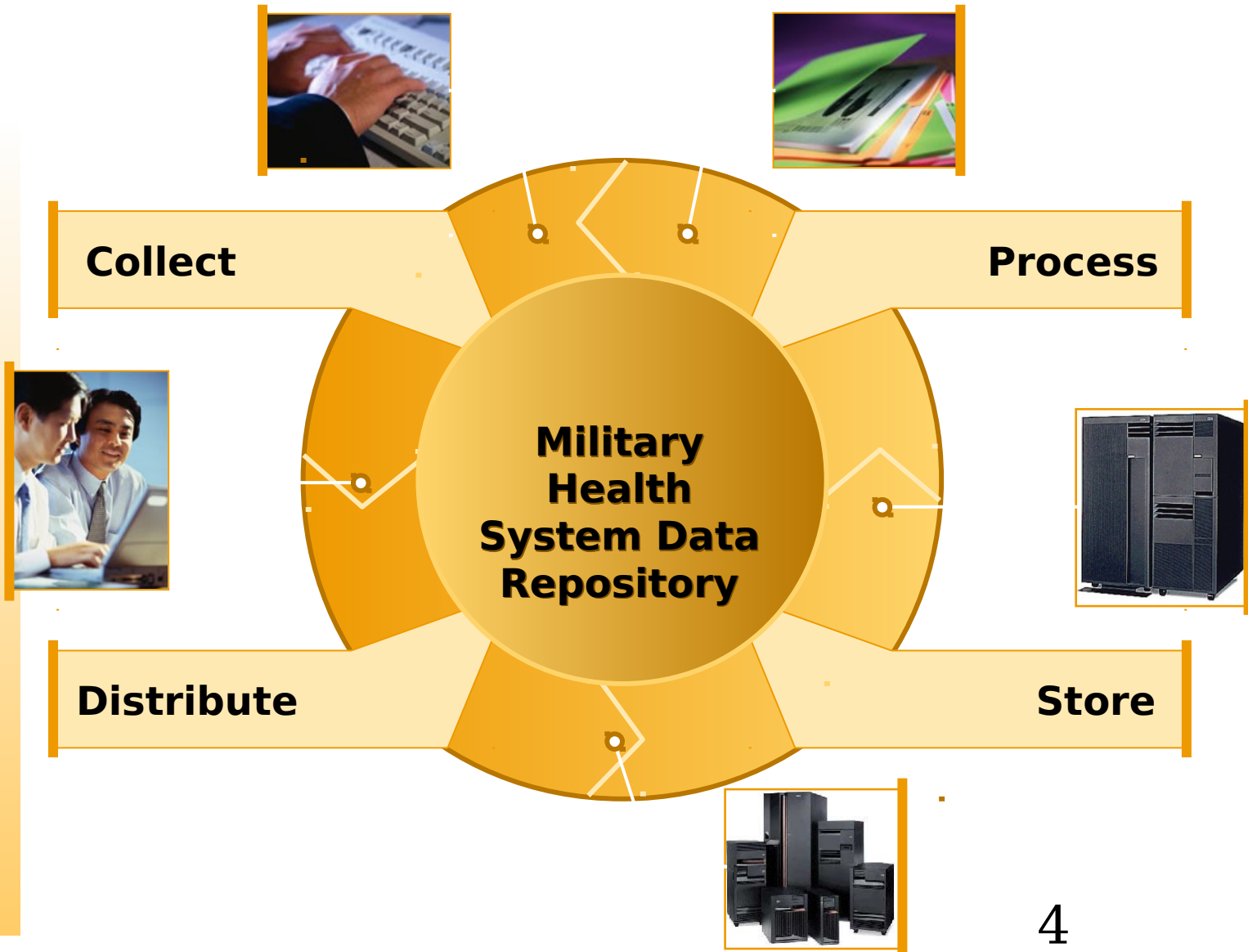


# EIDS Overview

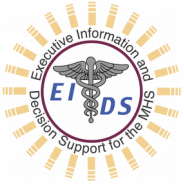
- **Centralized data store for the Military Health System (MHS)**
- **More than 2,500 users worldwide**
- **Collect, process, store, and distribute millions of military health care records**



# Transform Data Into Information



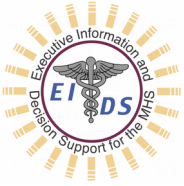




# Purchased Care Data

- **Managed Care Support Contractors**
  - Support military health care operations
  - Care for family members, guard/reserve, retirees and non-deployed forces
  - \$36 billion contract
  - Regional organization
- **Multiple tools to document care**
  - Standardized insurance claims





# Purchased Care Data

**FREE Pregnancy Course**  
Enroll Here

**WebMD**

Your Opinion Counts

Search the WEBMD HEALTH site

Go

from the **WebMD National News Center**

**Protecting Your Child's Dental Health**

It's one of the things parents dread most: an injury to their child's teeth. Here are the latest ways to prevent and treat accidental tooth loss in children.

Protect your family and your pets from the West Nile virus [here](#)

About WebMD WebMD Office Tour

**Drug & Product ALERTS**  
Click here >>>

**FIGHT DIABETES NOW**

**SEIZURES or FAINTING?**  
Similar symptoms. Very different treatments.  
[From Our Partner]

**Delivery New Baby!**  
No need for "What-ifs"

WEBMD HEALTH SITE Now Featuring onhealth

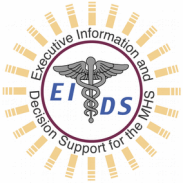
PHYSICIAN

OFFICE SERVICES

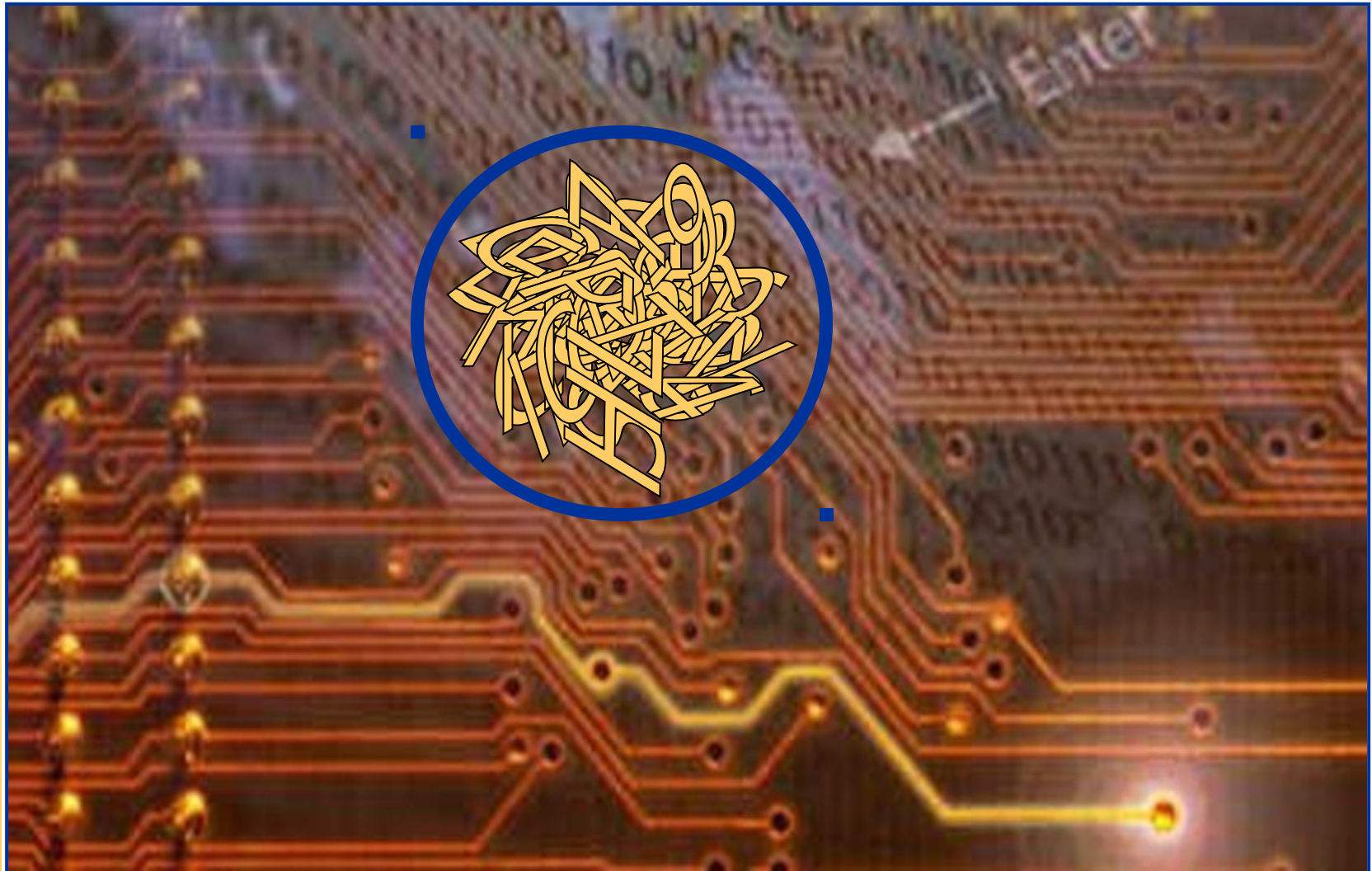
HEALTH TEACHER

HEALTHY LIVING

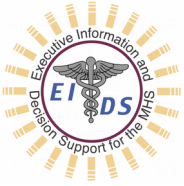




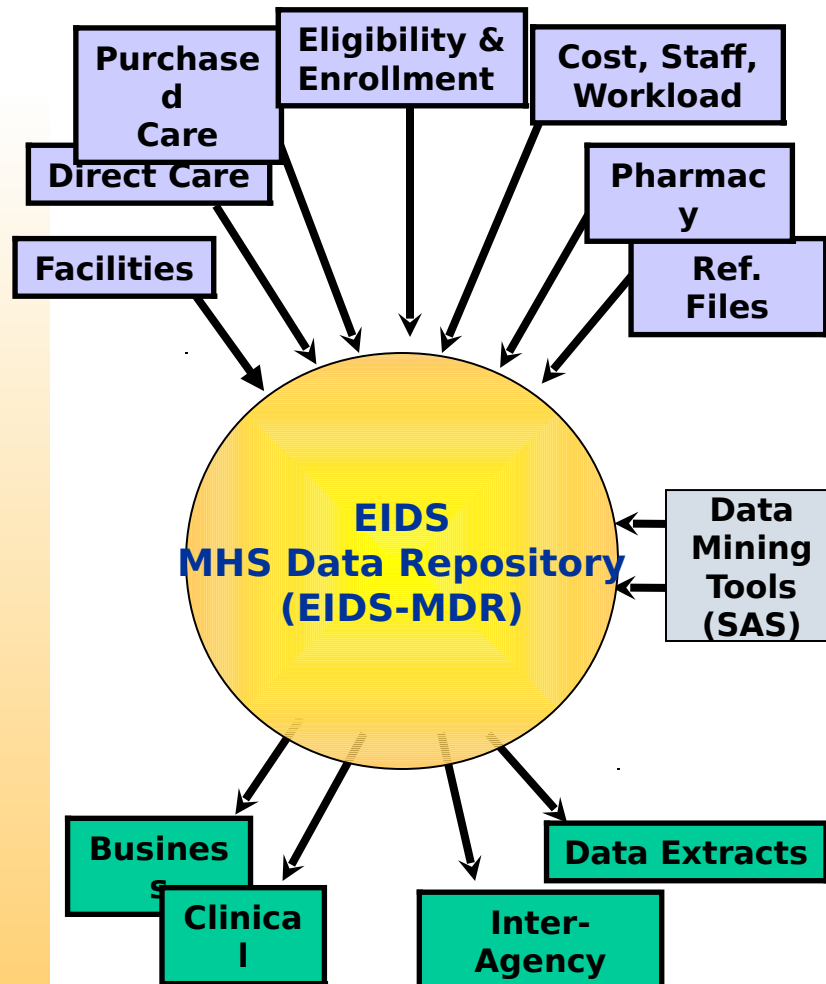
# Transforming Data into Information



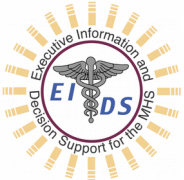




# MDR & Data Management



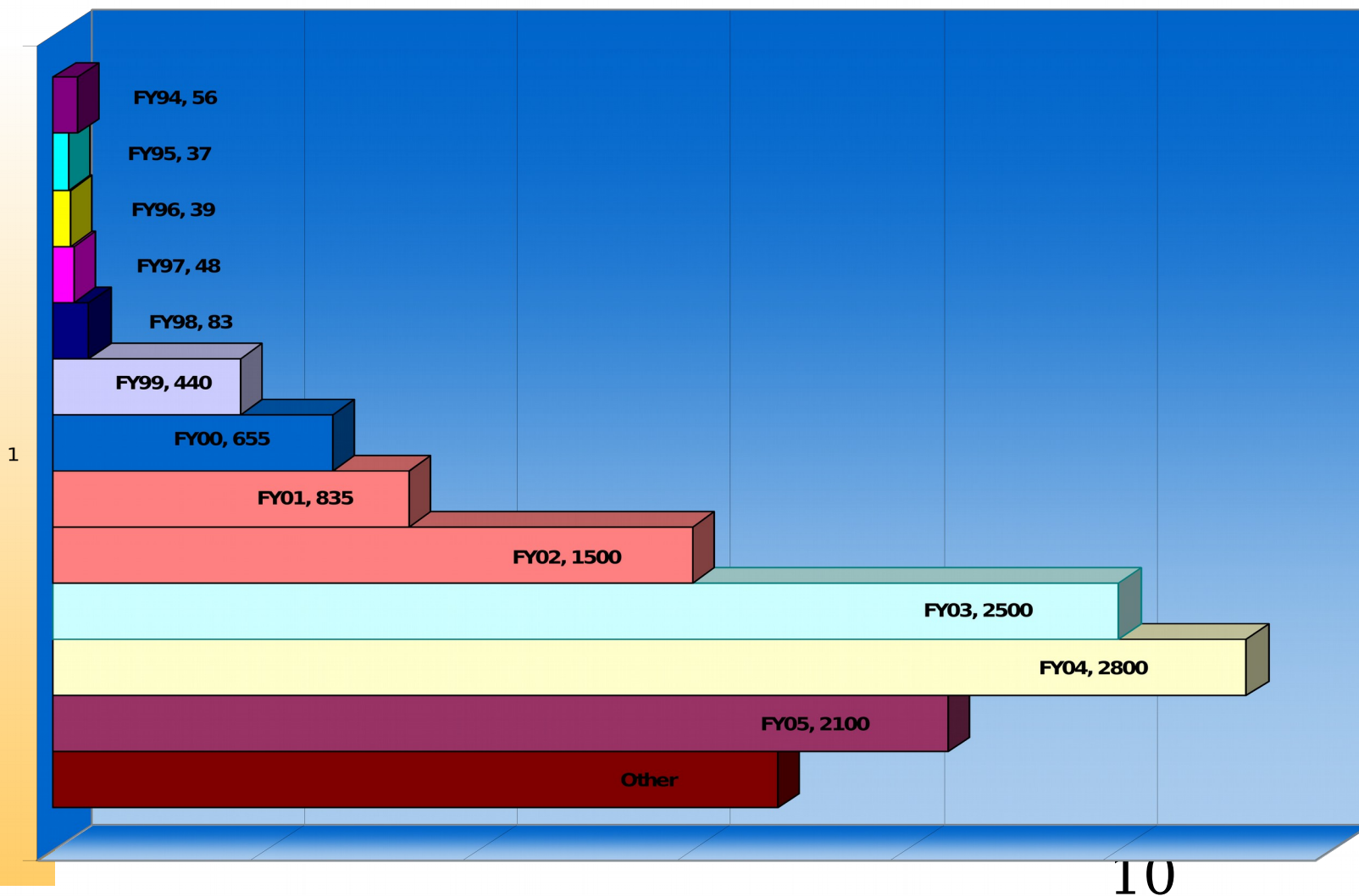
- **Central repository:**
  - MDR migrated to MHS enterprise architecture for decision support
  - EIDS applying same proven approach to Purchased Care data

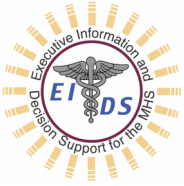


# Collect/Process

## MDR File Size

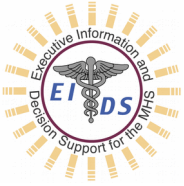
(in GB as of 11/09/05)





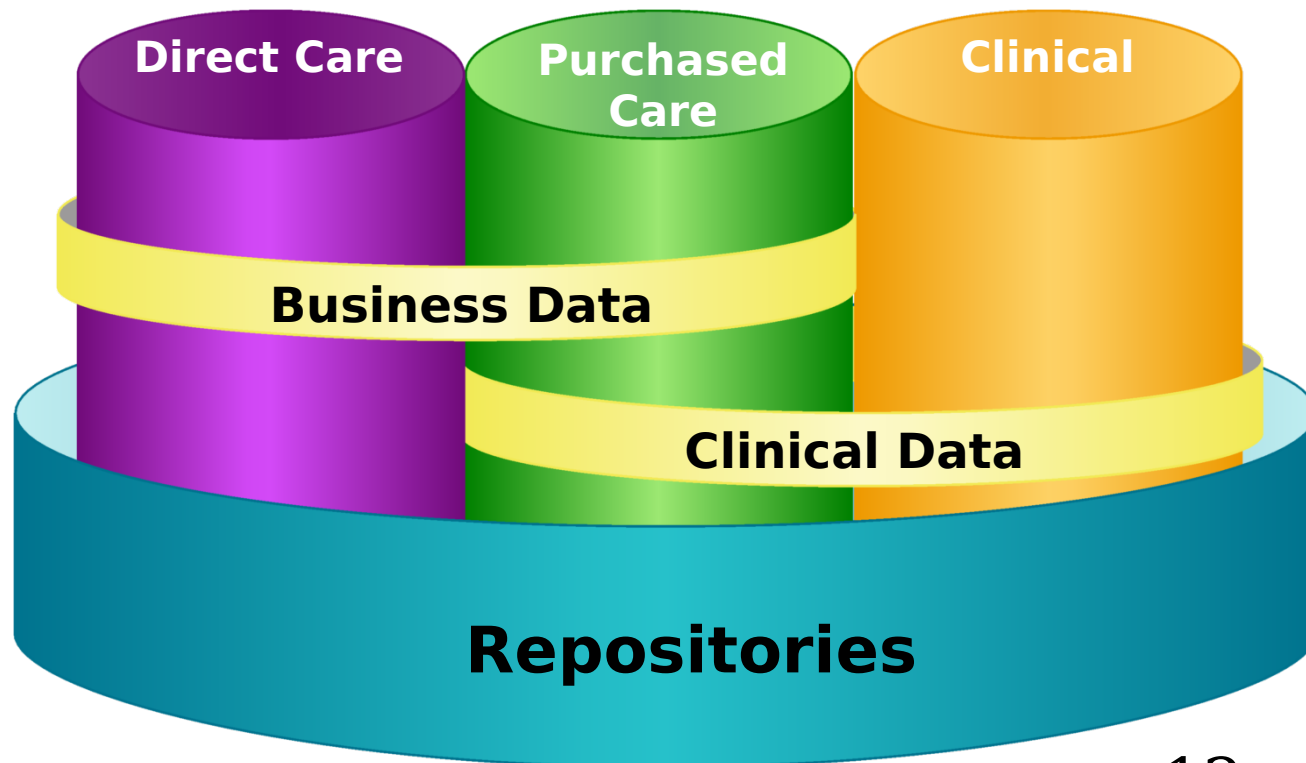
# Frequency and Volume of Inbound Data

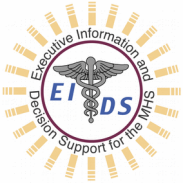
<b>Data Type</b>	<b>Data Source</b>	<b>Inbound Periodicity</b>	<b>Records/Year (~M)</b>
<b>Population (Eligibility/Enrollment )</b>	<b>DMDC/DEERS</b>	<b>Monthly</b>	<b>316</b>
<b>Health Care Service Record (HCSR) Professional Claims</b>	<b>EIDS-SDCS TMA-Aurora</b>	<b>Monthly</b>	<b>441</b>
<b>TRICARE Encounter Data (TED)</b>	<b>EIDS-SDCS TMA-Aurora</b>	<b>Monthly</b>	<b>413</b>
<b>Pharmacy Data Transaction Service (PDTS)</b>	<b>WebMD</b>	<b>Daily &amp; Weekly</b>	<b>568</b>
<b>Standard Ambulatory Data Record (SADR)</b>	<b>CHCS &amp; ADS Hosts</b>	<b>Daily</b>	<b>500</b>
<b>Standard Inpatient Data Record (SIDR)</b>	<b>CHCS Hosts</b>	<b>Monthly/ Bi-weekly</b>	<b>152</b>



# How Much Data?

- More than 5 billion records on-line consisting of 10+ years of data





# Applications and Components Distribution

## Business Marts

Direct Care:

- **M2**
- **MCFAS**
- **GIS**
- *Prospective Payment*

Purchased Care:

- **CDIS (Legacy)**
- **CMIS (Legacy)**
- **CURES (Legacy)**
- *PCDIS*
- *PCMIS*
- *PCURES*
- *CRDM (15 sub-sys)*
- **HA/TA**
- **DCS**

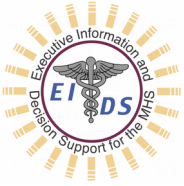
## Clinical Marts

- **PHOTO**
- **Clinical Data Mart (IOC)**
- **DMSS (Legacy)**
- *Medical Surveillance*
- *Clinical Analysis and Reporting (FOC)*
- *Provider Profiling*

## Enterprise Management :

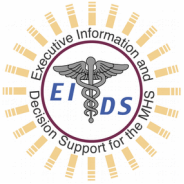
- **MDR**
  - Purchased Care Data Warehouse
  - Business Data Repository
  - *Clinical Data Warehouse*
- **TED Processing**
  - TED ODS
  - HCSR ODS
  - Feed Node
  - Extraction Transformation Layer
- **SDCS (Legacy)**
  - TED Phase II
  - PEPR 6A
- EIDS Portal
- PEPR Portal
- FHIE/BHIE



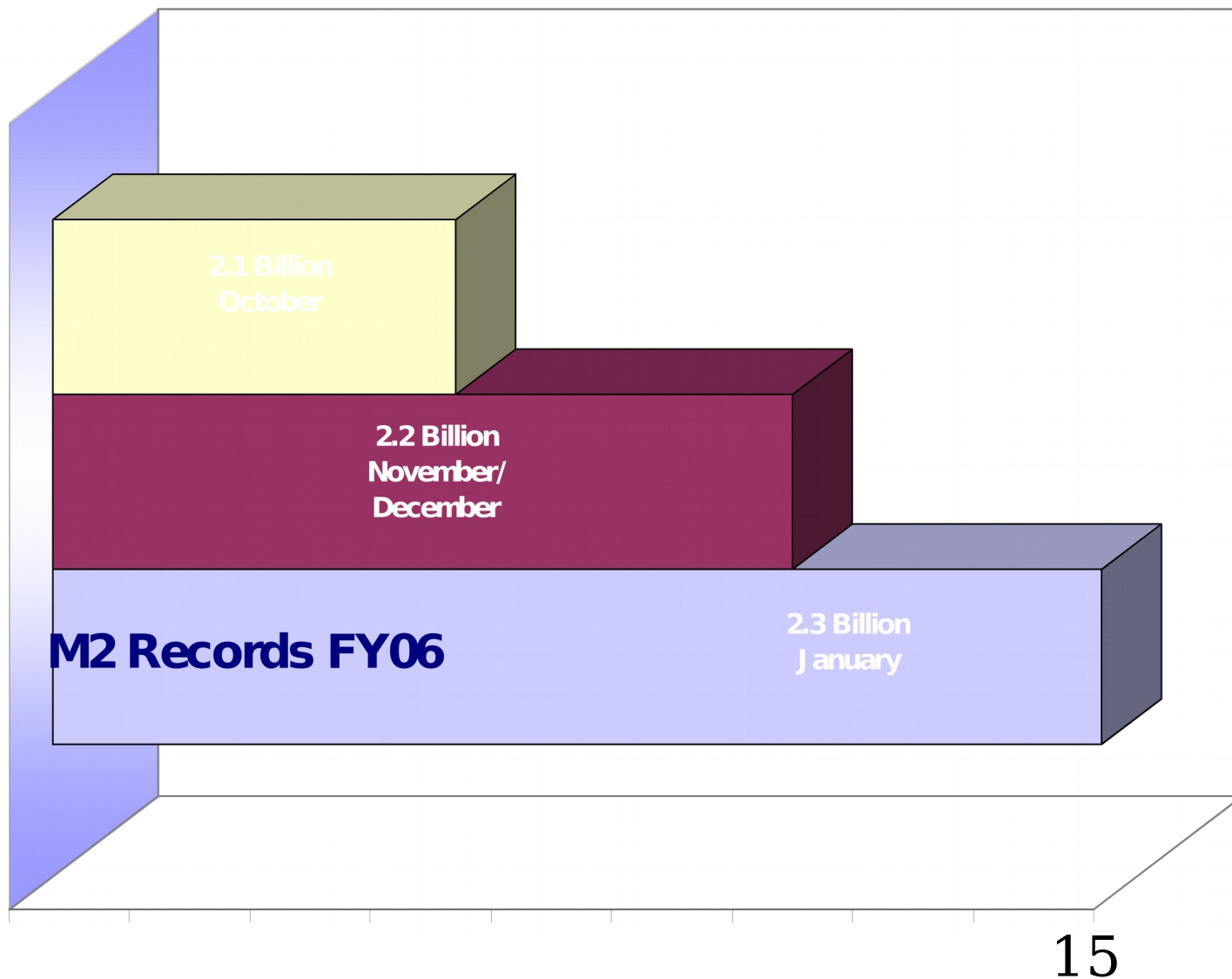


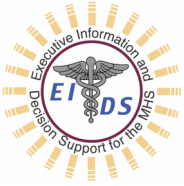
# Management Control Measures

- **Product Release (to include data)**
  - Multiple gates to assure acceptance by functional proponent
  - Design reviews (URS, PDR & CDR)
  - Testing & data validity checks
  - Each gate requires approval by functional proponent



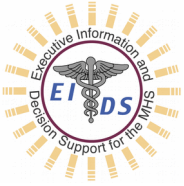
# Distribute





# Distribute

Customer	Data Types	Outbound Frequency
Army, Navy, and Air Force Leadership	SIDR, SADR, Bundled M2 data	Monthly
Defense Medical Surveillance System (DMSS)	HCSR, SIDR, SADR	Monthly (Daily SADRs)
Global Emerging Infection Surveillance (GEIS)	Processed SADR & PDTS data (PHI stripped)	Daily
Deployment Health	SADR Data for Japan and Korea DMIS IDs	Daily
Centers for Disease Control & Prevention (CDC)	Processed SADR data (PHI stripped)	Daily
Naval Environmental Health Center (NEHC)	Processed HL7 data (PHI stripped)	Weekly
Federal Health Information Exchange (FHIE) DVA	Processed HL7 & Separatee SADR & PDTS data	Monthly
WebMD (PDTS & TMOP TED retail)	TED Error Reports & TED reject records (plus tests)	Daily
TRICARE Commercial Partners	TED Error Reports & TED reject records	Daily
Internal Data Marts	Full Data Sets	Daily, Weekly, Monthly



# Who Uses EIDS?

- **TMA/Health Affairs Staff**

- Beneficiary Services Representatives & Health Benefits Analysts

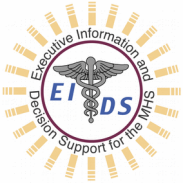
- **Military Treatment Facility Executive Staff**

- Through Offices of the Surgeons General

- **TRICARE Regional Offices**

- **Department of Justice, DoD Criminal Investigative Services**

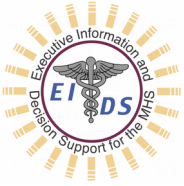
- Fraud, Waste, and Abuse



# Security Measures

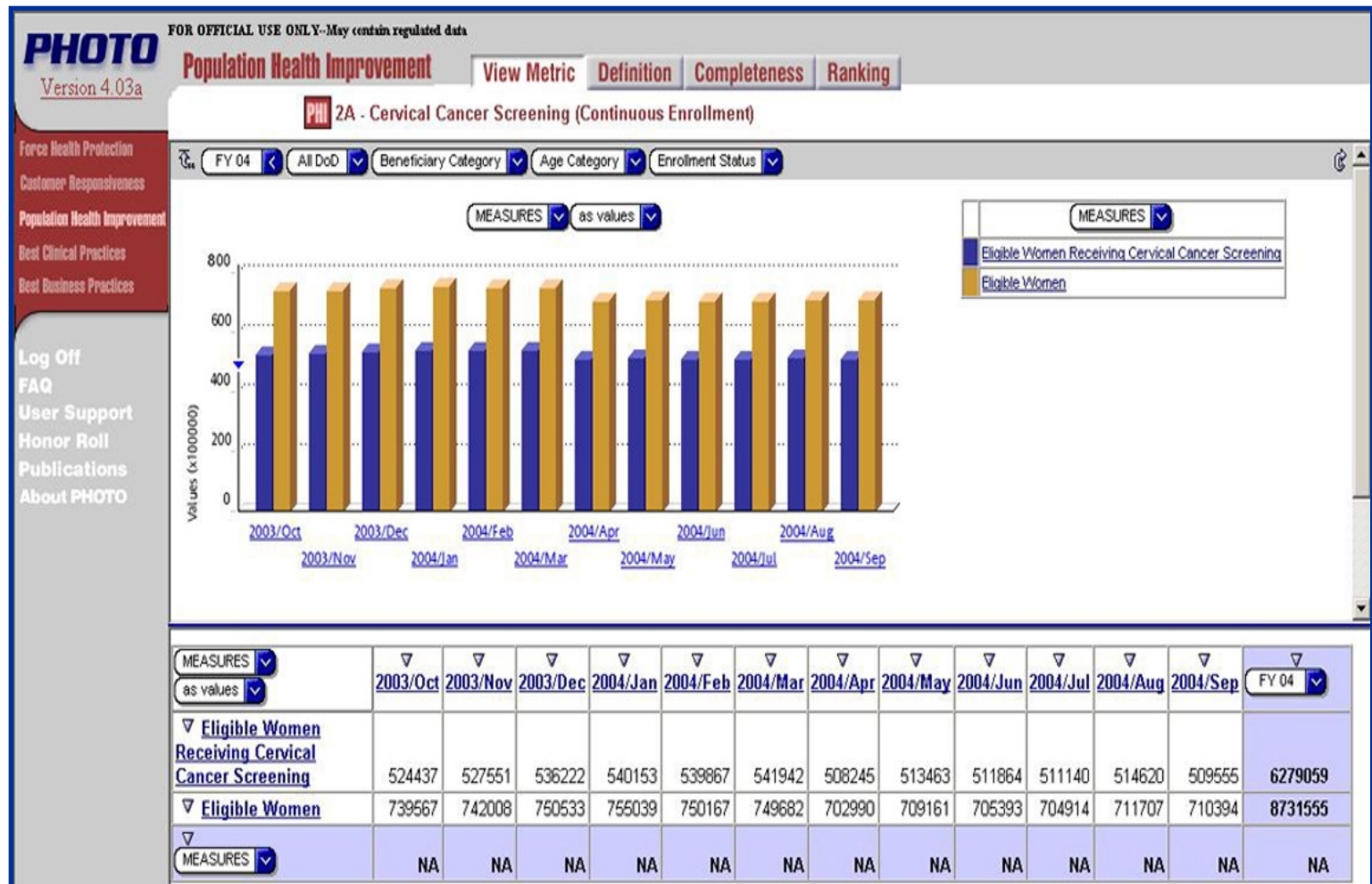
- Information Assurance & Vulnerability Assessment (**IAVA**) compliant
- **TMA Privacy** Office oversight
- **HIPAA** data anonymized based on user need (e.g. role-based access)
- All records **encrypted** during distribution
- All data marts **certified** before users are permitted access

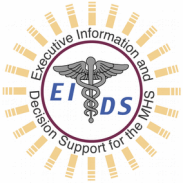




# Population Health Operational Tracking & Optimization

- Provide business & clinical population health metrics





# PHOTO Features

## Data

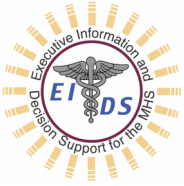
- Direct care
- Purchased care
- Customer Satisfaction Surveys
- Pharmacy

## Tool

- Web-based
- Simple, intuitive interface
- Summary level with drill-down capability

## Users

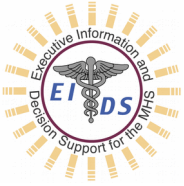
- Decision makers at all levels
- Over 200 users
- 62% at local treatment facilities



# MHS Management Analysis and Reporting Tool

- Provides analysts 'ad-hoc' access to MHS data





# M2 Features

## Data

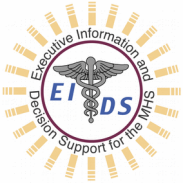
- Workload
- Population
- Customer Satisfaction Surveys
- Encounters
- Master patient/person index
- Population eligibility

## Tool

- Business Objects
- Fully ad-hoc; Windows-like interface

## Users

- Data savvy, data analysts
- Trickle up/down
- Over 800 users
  - 61% at local treatment facilities




# Managed Care Forecasting & Analysis System

- Provides population forecasts to support a wide range of planning and analysis functions


**EI/DS MCFAS Data Analysis Tools**

### MCFAS Beneficiary Population Forecasting Model (BPFM)

**Main Navigation**



Managed Care Forecasting & Analysis System



Executive Information and Decision Support for the MHS

Current User: bmiller

- Perform Default-Data Scenario
- Perform Custom-Data Scenario
- Build Custom Geographic Concept
- Retrieve Data
- System News
- Server Status
- Help
- Exit

The MCFAS BPFM is HA/TMA's official source of Military Health System (MHS) eligible population forecasts.

**Launch BPFM**

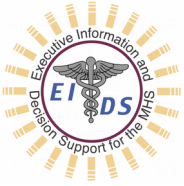
### MCFAS Enrollment Forecasting Model (EFM)



The MCFAS EFM provides users with projected enrollment based on user-specified inputs of producer behavior (PCM and MTF capability and availability) and beneficiary behavior (enrollment demand).

**Launch EFM**





# MCFAS Features

## Data

- Population Eligibility, Enrollment, and Forecasting

## Tools

- Beneficiary Population Forecasting Model (BPFM)
- Enrollment Forecasting Model (EFM)
- Geographic Information System (GIS)
- Simple intuitive web-based interfaces

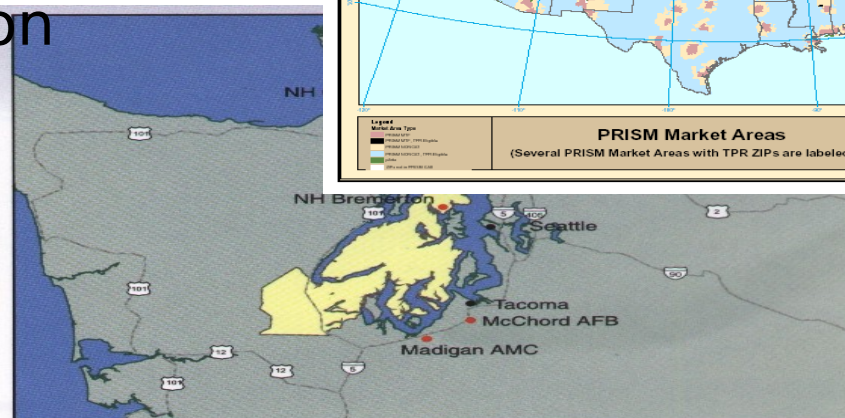
## Users

- Planners
- Budget/Resource Analysts
- 250 users
- 53% at local treatment facilities



- Market Analysis
  - Population densities
  - Provider locations

- Medical Surveillance
- Facilities Management & Military Construction



0 9 18 27 Miles

# GIS Report

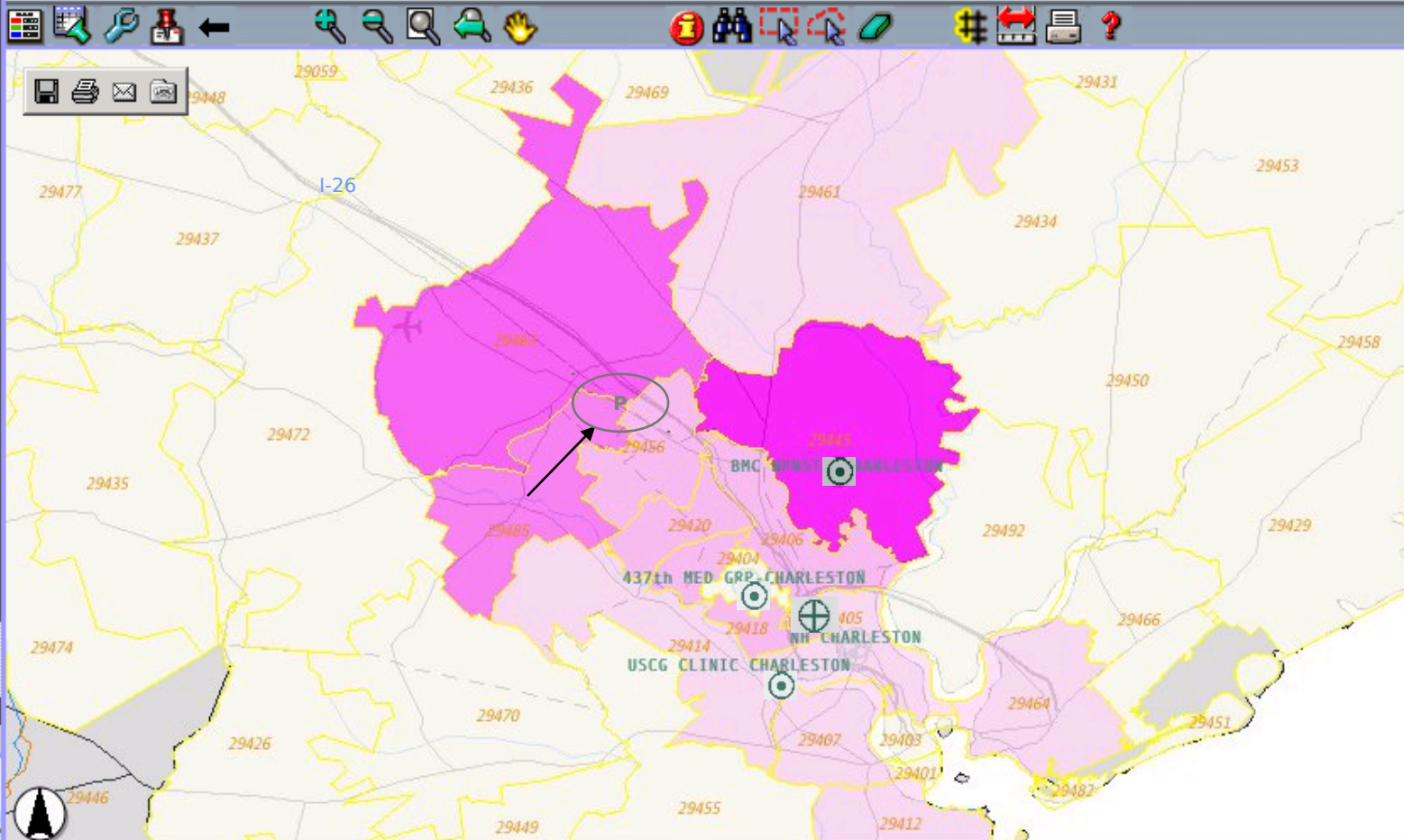
Zoom In

## Legend

charleston retirees

- 0 - 883
- 883 - 1766
- 1766 - 2649
- 2649 - 3532
- 3532 - 4415
- 4415 - 5298
- 5298 - 6183

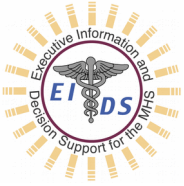
- Airports
- DoD Hospitals
- DoD Clinics
- Zip Codes/AP0
- Counties
- Hydrology
- Interstates
- Major Roads
- Countries



Map created by Altarus

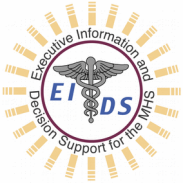
0 5mi 0 9km

REPORTID	USERID	ZIPCODE	AMOUNT	OBJECTID
20	jlaramie	29483	4420.0	9521



# Legacy Reporting Tools

- Provide MHS the ability to analyze the new TRICARE Encounter Data (**TED**) purchased care claims to replace the historical Healthcare Service Record (**HCSR**) records
- Co-locate **TED** and **HCSR** data in the same environment to optimize analysis and minimize sustainment



# Legacy Reporting Tools

## Data

- Purchased Care Claims

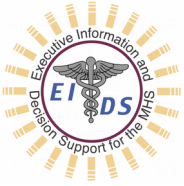
## Tools

- CHAMPUS/TRICARE Utilization Reporting and Evaluation System (CURES)
- CHAMPUS/TRICARE Medical Information System (CMIS)
- Care Detail Information System (CDIS)
- Duplicate Claims System (DCS)

## Users

- MHS managed care analysts, healthcare planners, resource managers, and financial analysts
- Beneficiary Counseling and Assistance Coordinators, Defense Criminal Investigative Service, Department of Justice analysts
- Over 500 Users -- 75% MCSC and HA/TMA users





# Patient Encounter Processing & Reporting (PEPR) Transition

## Legacy System:

- **CURES**  
CHAMPUS/TRICARE Utilization Reporting & Evaluation System
- **CDIS**  
Care Detail Information System
- **CMIS**  
CHAMPUS/TRICARE Medical Information System

## Target module:

### **PCURES**

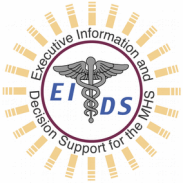
Purchased Care Utilization Reporting & Evaluation System

### **PCDIS**

Purchased Care Detail Information System

### **PCMIS**

Purchased Care Medical Information System



# Patient Encounter Processing & Reporting (PEPR) Transition

**PEPR Portal** Patient Encounter Processing & Reporting **PCURES** Home PCURES PCDIS PCMIS Satellite Help Profile Logout

ICD-9-CM Operation Procedure Codes  
ICD-9-CM Diagnosis Codes  
Provider Specialty Codes  
CPT-4/HCPCS Procedure

**ICD-9-CM Diagnosis Codes Reports**  
Select a report template:  
[PCURES-DC-100](#)  
Diagnosis code inpatient institutional & professional combined report.  
[PCURES-DC-100-S](#)  
Diagnosis code inpatient institutional & professional combined report summarized by Health Plan.

**PEPR Portal** Patient Encounter Processing & Reporting **PCMIS** Home PCURES PCDIS PCMIS Satellite Help Profile Logout

**PCMIS Menu**  
Total Care  
MTF  
Clinic  
Professional  
MTF  
Clinic  
Institutional  
MTF  
Clinic  
Place of Care  
User Subsets Main  
PCMIS Multi-Dimensional  
Foreign Country Multi-Dimensional Cube

**Prompt Navigator**  
PCMIS-PROF-MFL  
Fiscal Year  
Report Layout  
Health Plan

**Sponsor Service Branch**  
Select a Group and click Display: All Codes [Display](#)  
Select one or more: Air Force, Army [Add Selected](#)  
Currently selected:

**PEPR Portal** Patient Encounter Processing & Reporting **PCDIS** Home PCURES PCDIS PCMIS Satellite Help Profile Logout

**PCDIS**  
**Sponsor / Beneficiary Search [SB001]** [Reset](#)  
A search is performed using one of these criteria. Fields with asterisks must be entered.

**Sponsor Identifier Search**  
\* Sponsor Identifier:  -  -   
DEERS Dependent Suffix:  Patient DOB(mm/dd/yyyy):    
[Search](#)

<OR>

**Patient Name Search**  
\* Last, First, Middle Name:     
DEERS Dependent Suffix:  Patient DOB(mm/dd/yyyy):    
[Search](#)

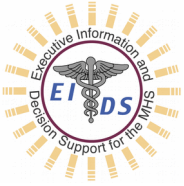
<OR>

**Patient Identifier Search**  
\* Patient Identifier:  -  -

# EIDS Data Marts:

---

**Coming  
Soon**



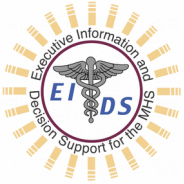
# Clinical Data Mart (CDM)

## ■ CDM

- Access to data from AHLTA for report/analysis
- Data available for 60-months
- Ad-hoc queries
  - Population health
  - Upgraded enterprise health record

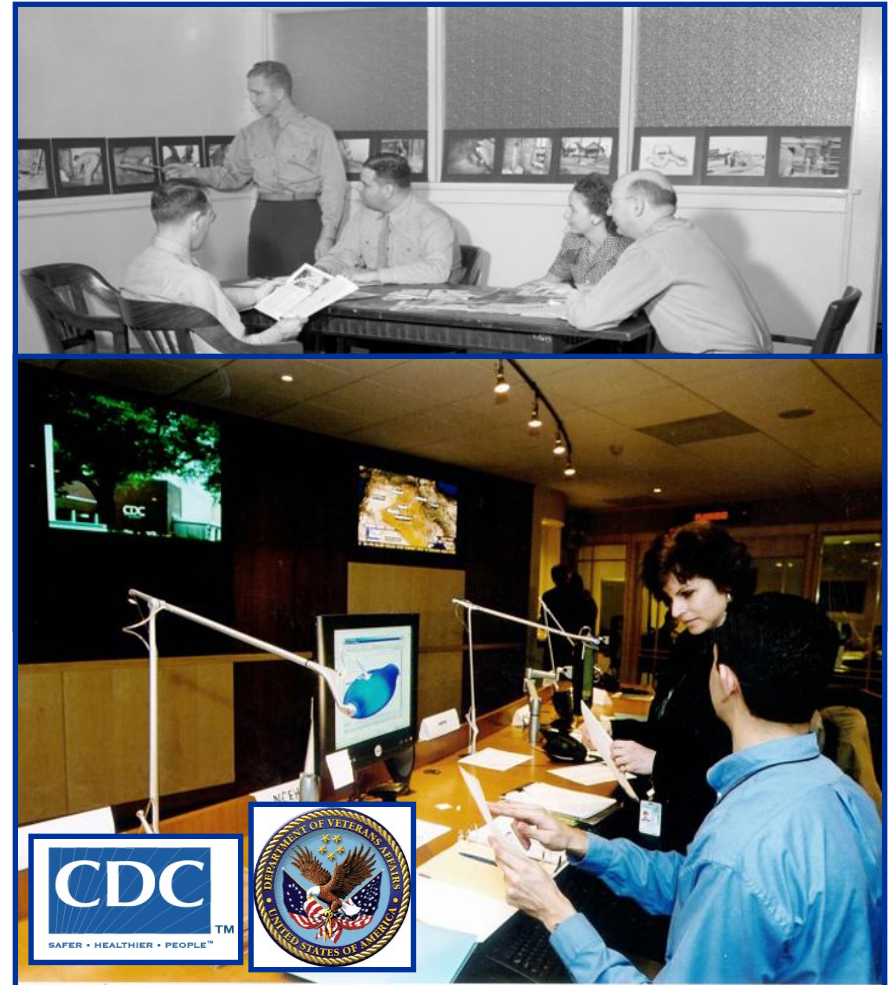
The screenshot displays the WebIntelligence Java Report Panel within a Microsoft Internet Explorer browser. The report is titled 'Appointment Classification Count' and shows a table with two columns: 'Appointment Classification' and 'Appointment Count'. The table lists four categories: AMBULATORY PROCEDURE (238), INPATIENT (1777), OUTPATIENT (99298), and TELCON (8338). The interface includes a left-hand pane with a tree view showing the report structure, a top toolbar with various report actions, and a status bar at the bottom indicating the last refresh date as November 24, 2003 7:13:17 PM.

Appointment Classification	Appointment Count
AMBULATORY PROCEDURE	238
INPATIENT	1777
OUTPATIENT	99298
TELCON	8338

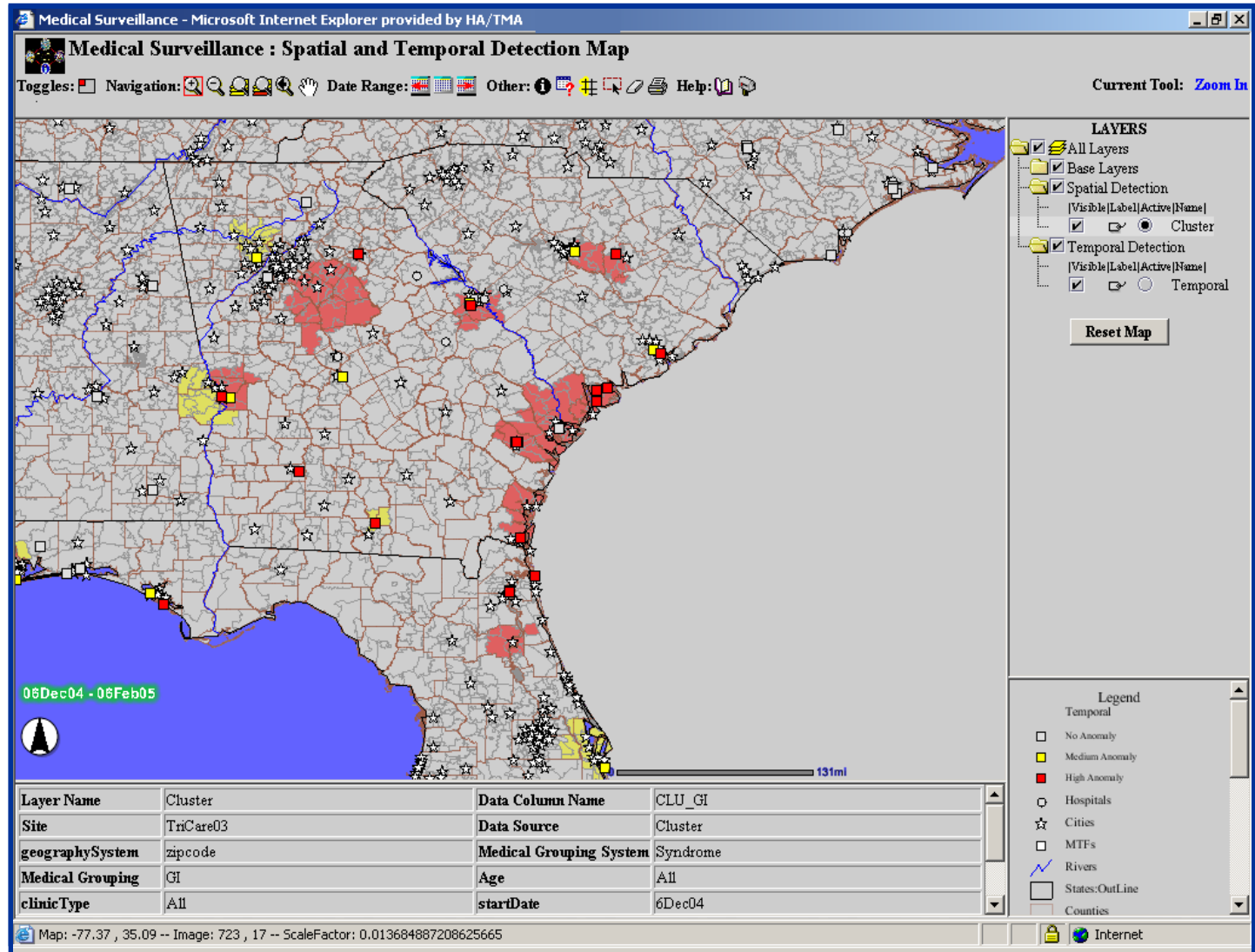


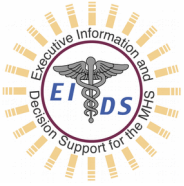
# Medical Surveillance

- Comprehensive DoD Medical Surveillance capability
- Functional requirements pulled from a variety of sources to support preventive medicine
- Syndromic



# Medical Surveillance

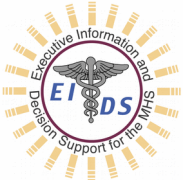




# In Summary

- **Central data repository for the Military Healthcare System (MHS)**
- **Business information provided to leadership from Congress to local clinic Commanders**
- **Expanding into clinical information for population health at the provider level**
- **Key to success - partnering with user community to maximize information sharing**





# Contact EIDS

IE/DS - Microsoft Internet Explorer provided by HA/TMA

File Edit View Favorites Tools Help Links »

**EXECUTIVE INFORMATION AND DECISION SUPPORT** 07 January, 2005

Welcome to EI/DS

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Welcome

**Product Access**

For Product access, please contact [EI/DS Access](#)

**EI/DS Captured Data**

- Customer Satisfaction Survey Data
- DEERS Point-in-Time Extract (PITE) - Eligible Beneficiaries
- Expense Assignment System IV (EAS IV)
- Health Care Provider Record (HCPR)
- Health Care Service Record (HCSR)
- Institutional Claims
- Health Care Service Record (HCSR)
- Professional Claims
- Health Level 7 (HL-7)
- Non-Availability Statements (NAS)
- Pharmacy Data
- Transaction Service (PDS)
- Standard Ambulatory Data Record (SADR)
- Standard Inpatient Data Record (SIDR)
- TRICARE Encounter Data (TED) Claims
- TRICARE Enrollment File
- Worldwide Workload Report

**EI/DS: Did you know...?**

The MCFAS Beneficiary Population Forecasting Model is a powerful MHS application for analyzing and forecasting beneficiary demographics. Variations in age, gender, locality, and beneficiary entitlement status can be tracked and projected over an 8-year planning horizon.

**Dates to Remember**

- TRICARE Conference - **24 Jan 2005**
- HIMSS Conference - **13 Feb 2005**

**Keep up-to-date on EI/DS!**

Enter your email address to subscribe to the eXpresso newsletter

**Web Portal**

- <https://eids.ha.osd.mil>
- account information
- product information

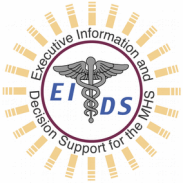
**MHS Help Desk**

phone: 800-600-9332

email: [eids@mhshelpdesk.com](mailto:eids@mhshelpdesk.com)

This site was last updated on Friday, January 07, 2005.  
**WARNING:** This is a Department of Defense (DOD) Computer System.  
POC: [webmaster@eids.ha.osd.mil](mailto:webmaster@eids.ha.osd.mil)

Welcome to EI/DS Internet



# Questions?